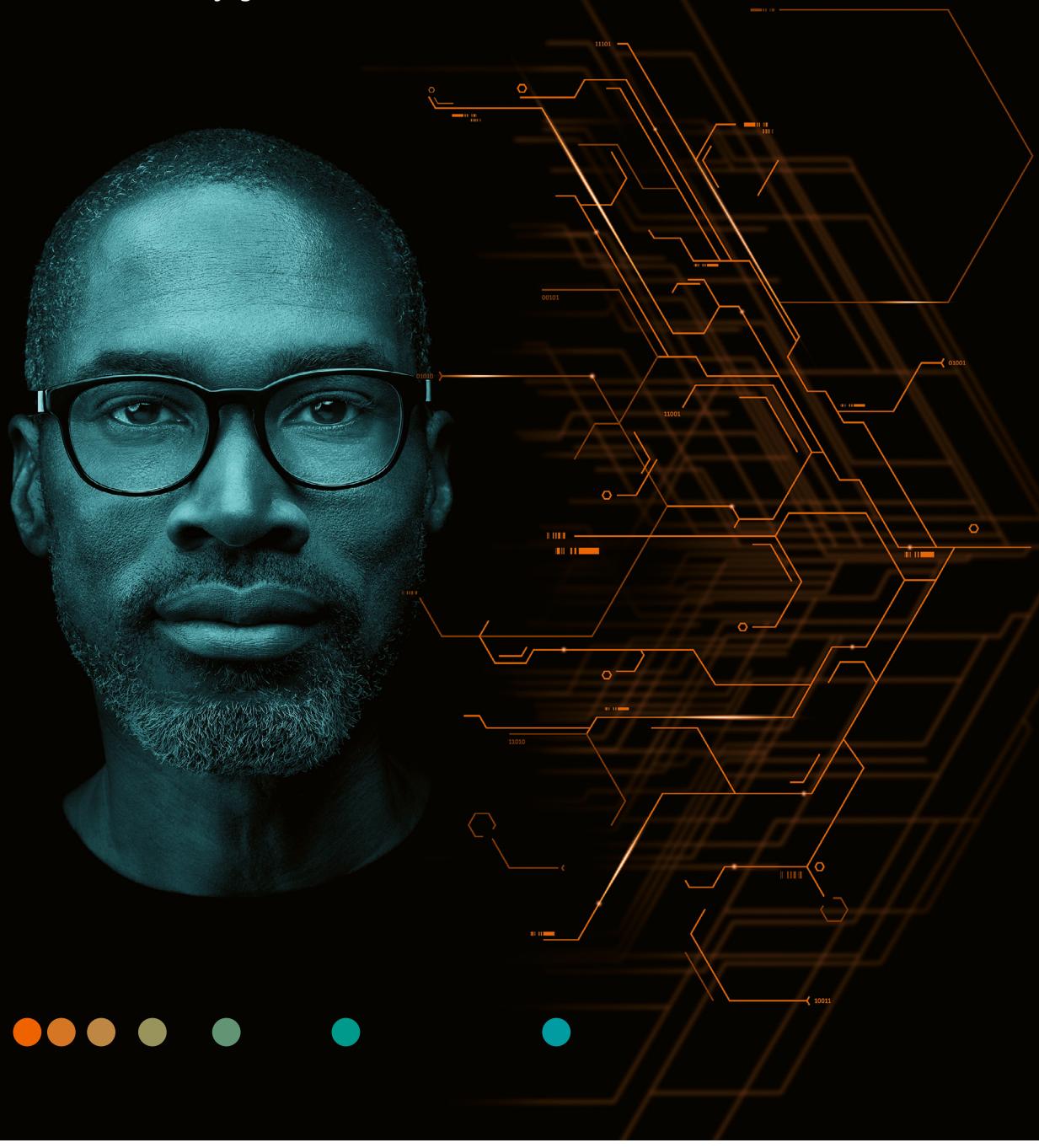
Syngo Carbon

Consolidate and process imaging data with ease

siemens-healthineers.com/syngo-carbon



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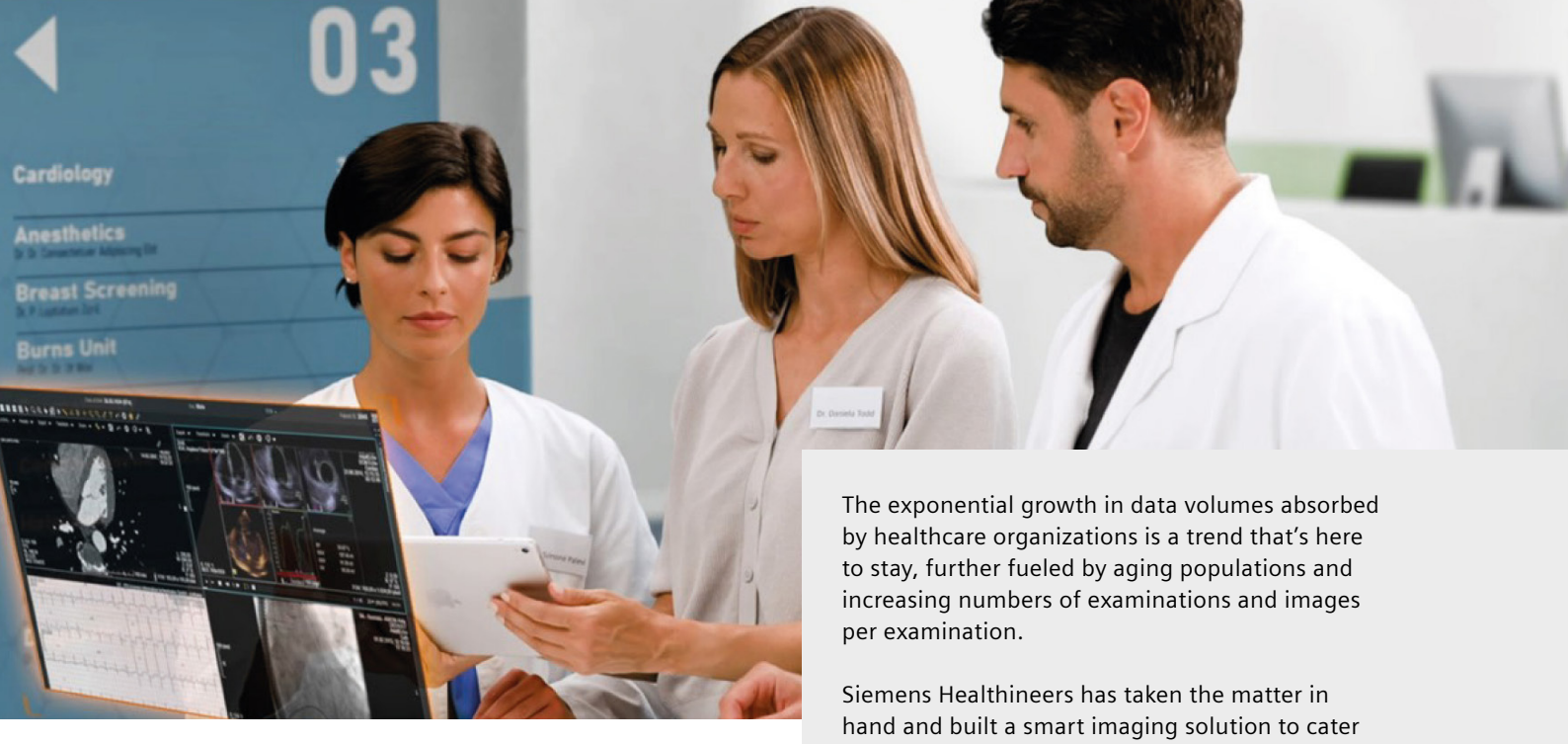
SIEMENS Healthineers



Author: Marion Bois | Photo credit: DR

The exponential growth in data volumes absorbed by healthcare organizations is a trend that's here to stay, further fueled by aging populations and increasing numbers of examinations and images per examination.

Siemens Healthineers has taken the matter in hand and built a smart imaging solution to cater to different uses and needs.

So much more than a traditional PACS solution

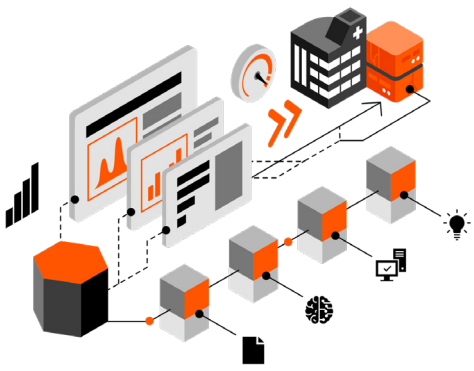
Over the years, the priorities of healthcare organizations have focused on three needs – constantly improving care for patients, reducing costs, and changing scale (e.g., with the emergence of regional hospital groups, or GHTs). Despite the size of the challenge, Siemens Healthineers took it on board, working alongside healthcare stakeholders to offer tailored solutions. Stéphane Rusek, IT manager of Monaco Cardiothoracic Centre, tells us why he chose to sign with Siemens Healthineers: "To cope with growing data volumes (image sizes doubled, 40% higher spatial resolution) we were instantly won over by a solution that could offer hierarchical storage connected to cloud-based services such as deep archive for cold, long-term storage."

After the PACS solutions for radiologists in the 1990s, Siemens Healthineers developed vendor-neutral archive solutions for holistic, multidisciplinary information processing. "With our latest solution, Syngo Carbon, we have achieved a new milestone," claims Frédéric Pégaz-Fiornet, Head of Digital Health & Cybersecurity at Siemens Healthineers France. "We now have a modular solution that can be rolled out across one organization or several." This enhanced interface delivers a rich and innovative user experience within an interoperable, secure, collaborative environment. "This tool stems from a participatory process which was conducted 5 years ago based on our Vendor Neutral Archive (VNA) solution. Several teams worldwide got together for a workshop to write the specs for the best-fit solution. And this is how Syngo Carbon came about!"

Advanced interoperability

One of the solution's features is its ability to integrate data of almost format. So varied data formats from a wide range of departments can be combined. Chayma Zaafouri, Digital Health Solutions Expert at Siemens Healthineers France, sums it up for us: "When it comes to opportunities and supporting our clients, the scale of projects often changes when we describe the solution's ability to support huge reams of data from clinical departments. We regularly go beyond the needs initially expressed." Proprietary data (from an organization or facility) are more easily integrated. This means savings for organizations in terms of hardware as data management can be centralized in a unified base.

Stéphane Rusek agrees. "The key challenge in this project was also how to handle unified data storage. Even though protection mechanisms exist, the architecture of the Syngo Carbon solution avoids data transfer between the different visualizer clients available, thus reducing data access time."



Stéphane Rusek
IT manager of Monaco Cardiothoracic Centre

Chayma Zaafouri
Digital Health & Cybersecurity Expert at Siemens Healthineers France

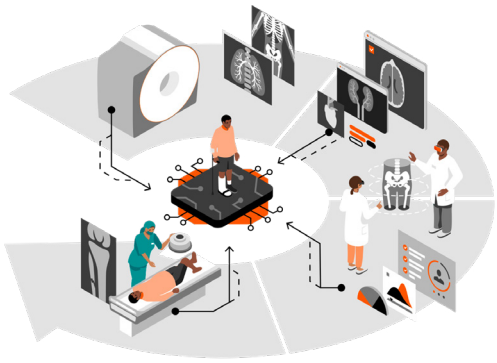
Frédéric Pégaz-Fiornet
Head of Digital Health & Cybersecurity at Siemens Healthineers France

Universal data management

Having a single organization-wide database makes life a whole lot easier. With an integrated data model offering centralized access to all patient data, diagnostics are far more reliable.

Yet the tool is also capable of adapting to the specific needs of each different department. "The system can recognize the type of data it needs to process," says Frédéric Pégaz-Fiornet. "For instance, depending on the source it knows how long the images need to be stored for and deletes them automatically as required." Similarly, other tasks can also be automated. Examinations used in research are automatically anonymized for example.

This is why the setup phase is so important: "A prior assessment phase is conducted in which the client briefs us on usage to enable us to develop data workflow scenarios."



Simplified and automated workflow

Syngo Carbon Space automatically performs certain measurements and detects potential pathologies before review by the radiologist. This saves time, as well as improving the precision of analyses and reducing variability as some of its algorithms are derived from artificial intelligence.

The solution also has a Smart Reporting module to help specialists write their reports: "All the measurements and analyses performed are integrated and documented in the report," explains Frédéric Pégaz-Fiornet. "One click is all it takes for the software to query for the necessary values." Stéphane Rusek also highlights another distinct advantage: "In retrospective studies we no longer need to pollute the active file queue in STS[1] to gain access to images. There are still many uses waiting to be discovered and the opportunities presented by this novel operating mode will allow us to identify them." Physicians can therefore perform all the tasks required for their reports in one place.

The benefits of the solution are clear: It will greatly facilitate interprofessional collaboration and communications between community-based and hospital-based physicians (e.g., via password-protected data transfers to community-based physicians). And research is set to benefit, too. Third-party apps[2] can be easily integrated as needed. This multifaceted solution can undoubtedly be adapted to a variety of different uses and users.

[1] Short Time Storage

[2] Use in conjunction and/or combination with third-party apps is the responsibility of the healthcare organization according to a user-defined method. The user is fully liable for ensuring the performance of the combined devices and the quality of results obtained.

Syngo Carbon consists of several products which are (medical) devices in their own right. Some products are under development and not commercially available. Future availability cannot be ensured.

Syngo Carbon is a solution from Siemens Healthineers that integrates Class IIa/IIb CE TUV 0123 marked medical devices. Please read the device's instruction manual carefully, in particular information relating to the field and precautions for use.

Syngo Carbon Space is an application designed for viewing medical data and supporting examination and analysis of medical images by trained medical professionals.

Class IIb CE marked under Regulation (EU) 2017/745 - EC 0123 (TÜV SÜD)

Manufacturer: Siemens Healthcare GmbH, Erlangen, Germany

Please read the device instruction manual carefully, in particular the precautions for use.

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